

REMARKS

Reconsideration and allowance of the above-identified application are respectfully requested. Claims 1-6 are now pending, wherein claims 1 and 2 have been amended, and claims 4-6 have been added. Claims 1 and 2 have been amended to place them in a format more consistent with U.S. practice. It is respectfully submitted that the amendments to these claims are not narrowing amendments.

Applicants' note with appreciation the Examiner's acknowledgement of Applicants' claim for foreign priority and that the certified copy of the foreign priority document has been received. Applicants' also appreciate the Examiner's consideration of the documents cited in the Information Disclosure Statement filed on April 24, 2002.

Claims 1-3 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable in view of the combination of alleged admitted prior art, U.S. Patent No. 6,598,233 to Choi ("Choi") and U.S. Patent No. 6,104,436 to Lee ("Lee"). This ground of rejection is respectfully traversed.

Prior to addressing this ground of rejection in detail, a brief summary of the disclosed invention is provided to highlight advantageous characteristics thereof. The disclosed invention is directed to systems and methods for displaying channel information. In digital television broadcasts, a channel, referred to as a main channel, may include a number of sub-channels with different content. Alternatively, the main channel may carry only a single

channel. The channel configuration, i.e., whether a single channel or several sub-channels are carried on a particular channel, may fluctuate with time. In conventional systems, a display corresponding to such channel fluctuation has not been provided, and in particular, there has been no provision for how to deal with a channel whose sub-channel information cannot be identified. This channel fluctuation and the lack of mechanisms for identifying such to a user can be confusing.

The disclosed invention addresses the above-identified and other deficiencies of conventional systems by providing a predetermined descriptor when channel information has not been analyzed and obtained by a broadcast receiver. Specifically, when a channel is selected the broadcast receiver decodes broadcast signals to, *inter alia*, obtain channel information. This channel information is stored in memory. Due to the fluctuation of channels described above, the broadcast receiver may not have any information regarding the channel configuration of channels other than the channel which has its information stored in the memory. When this occurs the broadcast receiver of the disclosed invention provides a predetermined descriptor for other channels being displayed along with the selected channel. The predetermined descriptor identifies to a user that information as to the configuration of the channel is not currently known.

Turing now to the claimed invention, the combination of the alleged admitted prior art, Choi and Lee does not render Applicants' claim 1

unpatentable because the combination does not disclose or suggest all of the elements of Applicants' claim 1. For example, the combination does not disclose or suggest that "the channel information includes the sub-channel number given a predetermined descriptor when the channel information has not been analyzed and obtained in the current operation" as recited in Applicants' claim 1.

The Office Action acknowledges that the alleged admitted prior art and Choi does not disclose or suggest that "the channel information includes the sub-channel number given a predetermined descriptor when the channel information has not been analyzed and obtained in the current operation." To remedy this deficiency the Office Action relies upon Lee.

Lee discloses a method and apparatus for displaying sub-channel information in a digital television receiver. Specifically, Lee discloses that when the number of programs in a currently selected RF channel are to be changed, an icon is displayed containing the title and number corresponding to the newly added program, together with icons corresponding to the remaining programs. Although Lee discloses techniques for identifying program changes when the receiver has identified such changes, Lee does not discuss how to address the lack of knowledge regarding the structure of a channel. Accordingly, Lee cannot disclose or suggest that "the channel information includes the sub-channel number given a predetermined descriptor when the channel information has not been analyzed and obtained in the current operation" as recited in Applicants' claim 1.

Nevertheless, the Office Action concludes that Lee discloses “notifying the viewer of sub-channel information/changes which also include acquisition (i.e. data not previously in memory, but storing – indicating to the viewer ‘updating’).” In the Background of the Invention section of Lee several deficiencies of prior systems are discussed. These deficiencies include “when programs of subchannels are changed, a user cannot be immediately advised thereof” and that “a user misses useful desired programs because the user can not be immediately informed of changed programs of sub-channels.” Lee concludes the patent by stating that “the present invention has the advantage that when programs of subchannels are changed while the user is watching TV, the user can be immediately informed thereof.” Accordingly, Lee addresses informing users of changed information. Lee does not address informing users that information regarding sub-channels has not been analyzed and obtained. Accordingly, it is respectfully submitted that Lee does not provide a disclosure or suggestion of providing a predetermined descriptor for a sub-channel number when the channel information has not been analyzed and obtained.

Because the combination of the alleged admitted prior art, Choi and Lee does not disclose or suggest that “the channel information includes the sub-channel number given a predetermined descriptor when the channel information has not been analyzed and obtained in the current operation” as recited in Applicants’ claim 1, the combination cannot render Applicants’ claim 1 unpatentable.

Applicants' claim 2 recites that "the display device displays a list of the channel information, including at least the channel specified by the user, wherein the channel information includes the sub-channel number given a predetermined descriptor when the sub-channel number cannot be designated." As discussed above with regard to Applicants' claim 1, the combination of the alleged admitted prior art, Choi and Lee does not disclose or suggest what to do when channel information has not been analyzed and obtained, much less providing a predetermined descriptor for the sub-channel number. Accordingly, for similar reasons to those discussed above with regard to Applicants' claim 1, it is respectfully submitted that the combination of the alleged admitted prior art, Choi and Lee does not render Applicants' claim 2 unpatentable. Claim 3 depends from claim 2, and is, therefore, patentably distinguishable over the combination of the alleged admitted prior art, Choi and Lee for at least those reasons stated above with regard to Applicants' claim 2.

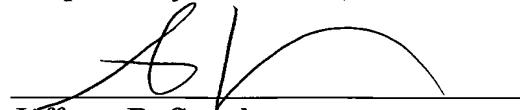
For at least those reasons stated above, it is respectfully requested that the rejection of Applicants' claim 1-3 as allegedly being obvious in view of the combination of the alleged admitted prior art, Choi and Lee be withdrawn.

New claim 4 is patentably distinguishable over the combination of the alleged admitted prior art, Choi and Lee because the combination does not disclose or suggest "when channel information has not been analyzed for a particular channel, channel information for the particular channel is displayed with a sub-channel number with a predetermined descriptor." Claims 5 and 6

depend from new claim 4, and are, therefore patentably distinguishable over the current rejection of record for at least those reasons stated above with regard to Applicants' claim 4.

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